

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of the Claims:

1. (Previously presented) A liner for a shaped charge perforator, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein characterized in that said liner comprises a first portion and a second portion, the first and second portions comprising different ratios of filler to matrix.
- 2-9. (Cancelled)
10. (Previously presented) A liner according to claim 1 in which the filler volume is in the range 45% to 85% of the combined volume of filler and matrix.
11. (Previously presented) A liner according to claim 1 in which the filler volume is in the range 45% to 65% of the combined volume of filler and matrix.
12. (Previously presented) A liner according to claim 1, wherein the filler comprises particles of substantially uniform size.
13. (Previously presented) A liner according to claim 1 in which the particles size lies in the range 10-250 nm.
14. (Previously presented) A liner according to claim 1, wherein the filler is a fibre.
15. (Withdrawn) A liner according to claim 1, wherein the filler is a flake.
16. (Withdrawn) A liner according to claim 1, wherein the filler is a non-metallic material.
17. (Previously presented) A liner according to claim 1, wherein the ratio of filler density to matrix density is substantially unity.

18. (Previously presented) A liner according to claim 1 in which the filler has a density in the range between 0.5 gcm^{-3} and 5 gcm^{-3} .
19. (Withdrawn) A shaped charge perforator comprising a liner according to claim 1.
20. (Withdrawn) A shaped charge perforator according to claim 19 comprising a case, a the liner and a quantity of explosive packed between the case and the liner.
21. (Withdrawn) A perforator gun comprising one or more shaped charge perforators according to claim 19.
22. (Withdrawn) A compound for use in manufacture of a liner according to claim 1 for shaped charge perforators under vacuum, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein and in which the filler volume comprises 45% to 85% of the combined volume of filler and matrix.
23. (Withdrawn) A manufacturing method for a liner according to claim 1 for a shaped charge perforator, the method comprising compounding a matrix of plastic material with particulate filler under vacuum.
24. (Cancelled)
25. (Withdrawn) A method according to claim 23 in which the filler volume comprises 45% to 85% of the combined volume of filler and matrix.
26. (Cancelled)
27. (Withdrawn) A method of improving fluid outflow from a well borehole the method comprising
perforating the borehole by means of a perforating gun according to claim 21.
28. (Withdrawn) A method according to claim 27 in which the fluid is one or more of hydrocarbons, water, and steam.

29. (Previously presented) A liner according to claim 1 for a shaped charge perforator, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein, the filler being non-uniformly distributed throughout the liner whereby to tune the liner.

30. (Previously presented) A liner according to claim 1 for a shaped charge perforator, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein, the liner being of non-uniform thickness whereby to tune the liner.

31. (Previously presented) A liner according to claim 1 for a shaped charge perforator, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein, the filler being substantially density-matched to the plastics material.

32. (Previously presented) A component according to claim 1, wherein the filler is a metallic material.

33. (Currently amended) A liner for a shaped charge perforator, the liner comprising a plastics material matrix having at least one non-explosive filler embedded therein wherein the liner includes a non-uniform distribution of the at least one non-explosive filler ~~comprises a first portion and a second portion, the first and second portions comprising different ratios of filler to matrix such that the~~ non-uniform distribution ~~different loadings of filler to~~ in the matrix ~~imparts~~provide the liner with tuned characteristics.

34. (New) A liner for a shaped charge perforator, the liner comprising a plastics metal matrix having at least one non-explosive filler embedded therein, wherein the distribution of the filler material is varied throughout the liner such that the filler material is graded over the extent of the liner.